

IN THE SPECIFICATION:

Please amend the Specification as follows.

Please replace the paragraph beginning on page 9 line 8 with the following rewritten paragraph:

In operation the timing of the satellite based positioning system i.e. the GPS time is sent to the mobile station 1 as the assistance information from the cellular system, see Figure 2. As shown in Figure 3, instead of using a GPS time that is linked to the broadcast transmission time T_t of a certain cellular signal in the cell₄, the GPS time is linked to the timing of the cellular system based on an estimated reception time T_r of the cellular signal at the mobile station.

Please replace the paragraph beginning on page 9 line 28 with the following rewritten paragraph:

The reception time T_r may be estimated based on information about the likely position 11 of the mobile station within the cell₄. Since the speed of travel of the cellular signal is known, the likely location of the mobile station makes it possible to compute an estimate for the delay (or offset) between the moments of transmission from the base station 5 and the reception at the mobile station.

Please replace the paragraph beginning on page 9 line 28 with the following rewritten paragraph:

In a preferred form the most likely position of the user equipment is estimated e.g. by means of the serving mobile location center 8. The most likely position can be, for example, estimated based on information about the mass center of the coverage area of the cell 4 i.e. the area where the mobile station can receive signals from the base station. The mass center can be computed by means of the software of the SMLC.

Please replace the paragraph beginning on page 10 line 26 with the following rewritten paragraph:

Another possibility is to estimate the location based on information about the so called weighted mass center of the coverage area of the cell 4. The weight can be selected e.g. based on information about population density, roads, traffic densities, geographical information and so on.

Please replace the paragraph beginning on page 10 line 31 with the following rewritten paragraph:

Average Timing Advance (TA) value may also be determined for the cell 4. This may be done e.g. by the operation and maintenance system, or by a base station controller (BSC). This kind of functionality is already supported by some communication systems.

The average TA may then be used to determine the most likely location of the mobile station.

Please replace the paragraph beginning on page 11 line 15 with the following rewritten paragraph:

The network may also collect information about average location of users in the cell 4 based on performed normal location determinations. These may have been done e.g. for commercial applications, such as in response to request by location service clients. Any appropriate location service (LCS) entity, such as the SMLC 8 may be adapted for this purpose.